

REMARKS

Status of the Claims

Claims 1-20 are pending in the application. Claims 3 and 12 are currently amended. Claims 1 and 2 are canceled. Reconsideration and allowance of all of the pending claims is respectfully requested.

New matter is not being added to the application by this amendment. Support for the amendment to claims 1 and 3 may be found, for example, in Example 1. Accordingly, no new matter is added and entry of this amendment is respectfully requested.

Claim Rejections – 35 U.S.C. §102/§103

Claims 1-9, 11-16, 18 and 19 are rejected under 35 U.S.C. §102(a) as being anticipated by Himeda '715 (JP 2004-224715). Claims 1-7, 11-14, and 18-20 are rejected under 35 U.S.C. §102(b) as being anticipated by Ziessel (*J. Am. Chem. Soc.* 1993, 115, 118-127). Claims 10 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lenges (*Organometallics* 2000, Vol. 19, pp. 1247-1254) in view of Himeda '715. Applicants respectfully traverse each of these rejections for the following reasons.

The Present Invention

The present invention is based on the discovery that the metal hydride complex represented by formula (I) has the property that acid is produced upon irradiation of light and the resulting solution then becomes acidic. In the present invention, the generation of acid upon irradiation by light means that H^+ is generated through deprotonation of the metal hydride

complex when it is excited by the irradiation of light. See page 5, line 16 - page 6, Scheme 1 of the present specification.

Distinctions between the present invention and the prior art

1. Himeda '715

Claims 1-9, 11-16, 18 and 19 are rejected under 35 U.S.C. §102(a) as being anticipated by Himeda '715 (JP 2004-224715). Applicants note that Himeda '715 has a publication date of August 12, 2004. The present application claims priority to JP 2003-338664, filed September 29, 2003. Applicants here include a verified English translation of JP 2003-338664. Accordingly Himeda '715 is not prior art to the present application and this rejection should be withdrawn.

2. Ziessel

Ziessel discloses the homogeneous water gas shift reaction using a cationic iridium complex, where the cationic iridium complex is excited by irradiation of white light. Ziessel, however, fails to disclose the formation of an acid solution as recited in the present claims 3 and 12. See Scheme II, page 124 of Ziessel. In the Ziessel reaction mechanism, where CO and H₂O coexist with the complex, the intermediate D immediately returns to the original structure along with the production of H₂. Thus, the resulting solution in Ziessel does not contain H⁺ and is not acidic. See scheme II.

On the other hand, in the present invention it is disclosed that by irradiation of light, H⁺ is generated via an excited state and the solution is thereby rendered acidic. See Page 6, Scheme 1 of the present specification. The production of H⁺ as a product of the reaction is not disclosed or

suggested by Ziessel. Therefore, applicants respectfully submit that this rejection should be withdrawn.

3. Lenges in view of Himeda '715

Himeda '715, as discussed above, is not prior art to the present application. Accordingly, this rejection should also be withdrawn.

Conclusion

Applicants respectfully submit that withdrawal of each of the pending rejections is warranted. An early reconsideration and Notice of Allowance is respectfully requested.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of \$120.00 is attached hereto.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Mark Konieczny (Reg. No. 47,715) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Application No. 10/573,780
Amendment dated July 16, 2007
Reply to Office Action of March 14, 2007

Docket No.: 1422-0713PUS1

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.14; particularly, extension of time fees.

Dated: July 16, 2007

Respectfully submitted,

By  #32,881

Gerald M. Murphy, Jr.

Registration No.: 28,977

BIRCH, STEWART, KOLASCH & BIRCH, LLP

8110 Gatehouse Road

Suite 100 East

P.O. Box 747

Falls Church, Virginia 22040-0747

(703) 205-8000

Attorney for Applicant

Attachments: English Translation of Japanese Patent Application No. 2003-338664